REMARKS/ARGUMENTS

Claims 1-12 remain in this application.

Newly added Claims 11 and 12 are Claims 4 and 9, respectively, rewritten in independent form with all the limitations of their base claim and any intervening claims less the limitation in Claims 1 and 6 of "each time".

The Examiner has objected to the drawings. Formal drawings will be provided when the application is allowed.

The Examiner has objected to the claims because of various informalities. The claims have been amended to define the abbreviation terms.

The Examiner has found Claims 4, 5 and 9 patentable if rewritten in independent form.

The Examiner has rejected Claims 1-3, 6-8 and 10 as being anticipated by Klink. Applicants respectfully traverse this rejection.

Referring to Klink, there is disclosed a method for examining the connectivity of links in MPLS networks. Klink teaches that MPLS-OAM packet flow is formed from MPLS-OAM packets that are inserted into the usual dataflow at the start of a segment and can be removed from this again at the end of the segment. They can be recorded and edited along the connection LSP, at the connection points, without intervention into the transmission process. See paragraph 24.

Before MPLS-OAM packets can be transmitted via the MPLS a network, the endpoints of the associated MPLS-OAM segment must be defined. The definition of source and sink from MPLS-OAM segment is not necessarily permanently specified for the duration of the connection. This means that the relevant segment can be reconfigured, for example by fields in the signaling protocol. See paragraph 25.

For monitoring of the connectivity of an MPLS connection LSP, special MPLS-OAM packets, referred to as OAM-ECHO packets, are defined. The MPLS-OAM packets are provided with a special label. The OAM-ECHO packets formed in this way are inserted into the flow of useful information. See paragraph 31.

Klink teaches a characteristic of the ECHO function is that a single OAM-ECHO packet sent in the source (downstream) sends back a plurality of packets as an answer, and in fact a packet for each connection point in a node through which the assigned connection LSP is routed. See paragraph 32. The ECHO function is a very useful means of checking where there is a requirement for connectivity of a connection LSP in an MPLS network. The complete network can be checked for connectivity before an MPLS network is brought into service, or special connections can be checked through in the event of a complaint by a customer. See paragraph 34.

Each further connection point connected to the sink forwards the OAM-ECHO packet further in the direction of the sink and at the same time generates a copy of it. The copies generated at the connection points are then further processed. See paragraph 36. First, the bit in the information part of the packet that designates the direction of transmission is changed from downstream to upstream. A location identifier is also entered in the information part of the OAM-ECHO packet. This is representative of the nodes of the MPLS code node wherein the processing was carried out. The location identifier also gives the assigned connection points.

The subsequent further processing of the packet code depends on whether a bidirectional or unidirectional mode is to be used. See paragraph 37. In the case of the unidirectional mode, no feedback channel is necessary and the copy packet is stored in the MPLS node. The packets are then collected from all the MPLS nodes via signaling protocols and sent back to the source. In the case of a bidirectional mode, a feedback channel for the assigned connection LSP is necessary to send back the copy OEM-ECHO packet to the source where it was originally inserted. See paragraph 39.

In regard to Claim 1 of applicants, there is the limitation of "means for dynamically placing connection points along the path through which the connection is established each time after signaling from the first node to the second node returns to the first node". It is respectfully submitted that Klink does not teach or suggest placing connection points "each time after signaling from the first node to the second node returns to the first node". The Examiner cites paragraphs 37 and 39 as arriving at this limitation. However, a review of paragraph 37, and as explained above, simply teaches that the bit that designates the direction of transmission is changed from downstream to upstream. A location identifier is also entered into the information part of the OAM-ECHO packet that is representative of the MPLS node where the processing was carried out. Paragraph 37 goes on to state that further processing of the packet depends on whether a bidirectional or unidirectional mode is to be used. Paragraph 38 specifically states that in the unidirectional mode the packets are then collected from all the MPLS nodes via signaling protocols and sent back to the source. The collection of packets occurring in the unidirectional mode certainly does not indicate, let alone teach or suggest placing connection points along the path each time after signaling from the first node for the second node returns to the first node, as found in Claim 1.

In the case of a bidirectional mode, a feedback channel is used to send back the copy the OAM-ECHO packet to the source. But all this paragraph 39 of Klink teaches is that there is a

feedback channel to send the copy of OAM-ECHO packet to the source and not "dynamically placing connection points along the path. . .each time after signaling from the first node to the second node returns to the first node".

It is respectfully submitted the Examiner is reading a limitation of applicants' claimed invention into the teachings of Klink, which are not there. The specific text of Klink does not teach this limitation "each time" of applicants. Thus, the Examiner's position that placing the location ID into the OEM-ECHO packet does not meet the limitation of "dynamically placing connection points along the path" of applicants' claimed invention. The location identifier simply identifies where the processing was carried out. Paragraph 39 simply teaches to send back the copy of the OEM-ECHO packet to the source. There is no associated teaching of an action of dynamically placing connection points. . .each time after signaling from the first node to the second node returns to the first node". It is respectfully submitted that the examiner is assuming this limitation is occurring in Klink, while instead there is no actual statement what happens to the information after it gets back to the source. The information could just as easily be stored and accumulated over time and simply used to inform the user about the status of the network over time, without ever actually being used to make changes to the network. Accordingly, Claim 1 is not anticipated by Klink.

Claims 2-5 are dependent to parent Claim 1 and are patentable for the reasons Claim 1 is patentable.

Claim 6 is patentable for the reasons Claim 1 is patentable. Claims 7-9 are dependent to parent Claim 6 and are patentable for the reasons Claim 6 is patentable.

Claim 10 is patentable for the reasons Claim 1 is patentable.

Furthermore, in regard to Claim 3, there is the limitation of "an OAM path matrix disposed at each node which identifies the connection points and fault management and performance monitoring conditions." It is respectfully submitted that paragraphs 36 and 37 of Klink, which the Examiner cites as teaching the limitation of Claim 3, not only does not teach an OAM path matrix, but does not teach any type of path matrix which identifies the connection points and fault management and performance monitoring conditions. All of these three types of information are required to be present in the path matrix of the invention of Claim 3. Paragraphs 36 and 37 are silent about including all these three types of information in any type of memory let alone in an OAM path matrix. It is respectfully submitted that applicants disagree with the Examiner's statement in the Office Action that a matrix by definition is a place or point from which something else originates. Here, the OAM path matrix is a structure which stores the connection points and the fault management and performance monitoring conditions. Accordingly, Claim 3 is additionally patentable for this reason. Claim 8 is also additionally patentable for the same reason.

In view of the foregoing amendments and remarks, it is respectfully requested that the outstanding rejections and objections to this application be reconsidered and withdrawn, and Claims 1-12, now in this application be allowed.

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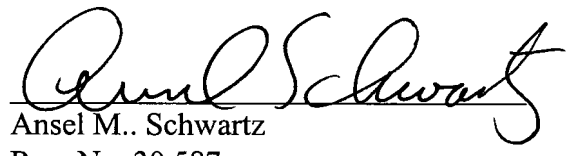
Ansel M. Schwartz
Registration No. 30,587

Respectfully submitted,



Ansel M.. Schwartz
Reg. No. 30,587
201 N. Craig Street, Suite 304
Pittsburgh, PA 15213
Tel.: (412) 621-9222